WORK ASSIGNMENT

John George

OUT THE DOOR 10/28/83

37343

A. Contractor: NUS Corporation
910 Clopper Rd.
Gaithersburg, MD 20878

B. Contract Number: 68-01-6699

C. SITE/Title: Asbestos Dump

D. Assignment Number 45.2LA2.0

E. Statement of Work: Attached

F. Level of Effort (Work hours): 833

G. Period of Performance: 10 mos

Contracting Officer

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Contracting Officer Approval Ronald L. Kovach Date 9/27/83

Project Officer

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Signature of Issue Paul E. Nadeau Date 9/22/83

Deputy Project Officer

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Signature _____ Date _____

Regional Site Project Officer Headquarters Project PHONE 382-7998

Signature David Huber Date 9/22/83

ASB 002 0262

Addendum to Scope of Work

Asbestos Dump RI/FS Work Plan

1. Topographic Survey - establish layout for sampling

2. Geotechnical Investigation

   - geophysical survey
   - physical soil testing
   - data evaluation

3. Sampling Program

   - Millington Site:
     - Air - asbestos fiber count
     - Soil - asbestos fiber count; asbestos mineral identification
     - Surface water (Passaic River) - asbestos fiber count (upstream, downstream, and at site)
     - Groundwater - priority pollutants & phenylmercuric acetate (PMA)
     - Leachate (if present) - priority pollutants & PMA
   - New Vernon Road, White Bridge Road, and Wildlife Refuge Sites:
     - Air - asbestos fiber count
     - Soil - asbestos fiber count; asbestos mineral identification; comparison of asbestos mineral types identified at these sites with those identified at the Millington site
     - Surface Water - priority pollutants

4. Remedial Investigation Report

5. Feasibility Study

Asbestos Dum

SCOPE OF WORK

TASK 1 -- DESCRIPTION OF CURRENT SITUATION

Describe the background information pertinent to the site and its problems and outline the purpose and need for remedial investigation at the site. The data gathered during any previous investigations or inspections and other relevant data should be used.

a. Site Background. Prepare a summary of the regional location, pertinent area boundary features, the general site physiography, hydrology, and geology. The total area of the site and the general nature of the problem, including pertinent history relative to the use of site for hazardous waste disposal, should be defined.

b. Nature and Extent of Problem. Prepare a summary of the actual and potential on-site and off-site health and environmental effects.

c. History of Response Actions. Prepare a summary of any previous response actions conducted by either local, State, Federal or private parties, including the site inspection, other technical reports, and their results. This summary should address any enforcement activities undertaken to identify responsible parties, compel private cleanup, and recover costs. A list of reference documents and their location shall be included.

TASK 2 -- INVESTIGATION SUPPORT

Conduct preliminary work necessary to conduct the site investigations and feasibility study.

a. Contractor Procurement. Prepare contractor procurement documents and award sub-agreement to secure the services necessary to conduct the remedial investigation and feasibility study.

b. Site Visit. Conduct initial site visits required to become familiar with site topography, access routes, and proximity of receptors to possible contamination, and collect data for preparation of the site safety plan. The visit should be used to verify the site information developed in Task 1.

c. Define Boundary Conditions. Establish site boundary conditions to limit the area of site investigations. The boundary conditions should be set so that subsequent investigations will cover the contaminated media in sufficient detail to support following activities (e.g., the feasibility study). The boundary conditions may also be used to identify boundaries for site access control and site security.

d. Site Map. Prepare a site map showing all water features, drainage patterns, tanks, buildings, utilities, paved areas, easements, right-of-ways, and other features. The site map and all topographic surveys shall be of sufficient detail and accuracy to locate and report all existing and future work performed at the site. [Permanent baseline monument, bench marks, and reference grid tied into any existing reference system (i.e., State or USGS) should be considered as an option.]

e. Site Office. If agreed to be EPA and the State, establish a temporary site office to support site work.

TASK 3 -- SITE INVESTIGATIONS

Conduct those site remedial investigations necessary to characterize the site and its actual or potential hazard to public health and the environment. The site investigations should result in data of adequate technical content to assess preliminary remedial alternatives developed in Task 4 and support the detailed evaluation of alternatives during the feasibility study.

All samples analyses will be conducted at laboratories following EPA protocols, or equivalents. Strict chain-of-custody procedures will be followed and all samples will be located on the site map [and grid system] established under Task 2.

a. Hydrogeologic Investigation. Develop and conduct a program to determine the present and potential extent of ground water contamination. Efforts should begin with a survey of previous hydrogeologic studies and other existing data. The survey should address the degree of hazard, the mobility of pollutants considered, the soils' attenuation capacity and mechanisms, discharge/recharge areas, regional flow direction and quality, and effects of any pumping. Such information may be available from the USGS, the Soil Conservation Service, and local well drillers. Subsequent to the survey of existing data, a sampling program should be developed to determine the horizontal and vertical distribution of contaminants and predict the long-term disposition of contaminants. The sampling program should, at a minimum, evaluate factors affecting ground water performance, background levels of contamination, the

type of well construction utilized (must be compatible with type of measurement taken), the number and location of wells, chain of custody and record of samples, and the ground water sampling method. Geophysical techniques can be considered for use in defining subsurface conditions and design of the sampling program.

b. Soils and Sediments Investigation. Develop and conduct a program to determine the location and extent of contamination of surface and subsurface soils and sediment as appropriate. This process may overlap with certain aspects of the hydrogeologic study (e.g., characteristics of soil strata are relevant to both the transport of contaminants by ground water and to the location of contaminants in the soil; cores from ground water-monitoring wells may serve as soil samples). A survey of existing data on soils and sediments may be useful. A sampling program should be developed and conducted to determine the horizontal and vertical extent of contaminate soils and sediments. Information regarding local backgrour levels, degree of hazard, location of samples, techniques utilized, and methods of analysis should be included. The investigation should identify the locations and probable quantities of subsurface wastes, such as buried drums, through the use of appropriate geophysical methods.

c. Surface Water Investigation. Develop and conduct a program to determine the extent of contamination of surface water as appropriate. This process may overlap with the soils and sediments investigation; data from stream or lake sediments sampled may be relevant to surface water quality. A survey of existing data on surface flow quantity and quality may be a useful first step. A sampling program should be developed and conducted, discussing the degree of hazard, including information on local background levels, location and frequency of samples, sampling techniques, and method of analysis.

d. Air Investigation. Develop and conduct a program to determine the extent of atmospheric contamination as appropriate. The program should address the tendency of substances to enter the atmosphere, local wind patterns and the degree of hazard. A sampling program should be developed and conducted, specifying location, timing, and frequency of samples, sampling techniques, and method of analysis.

TASK 4 -- PRELIMINARY REMEDIAL TECHNOLOGIES

Identify preliminary remedial technologies, providing detai sufficient to ensure that site investigations will develop a data base adequate for the evaluation of alternatives during the Feasibility Study.

a. Pre-Investigation Action. Prior to starting any site investigations, assess the site conditions to determine potential categories of source control and off-site remedial actions.

b. Post-Investigations Evaluation. Either during or following the investigations assess the investigation results and recommend preliminary remedial technologies likely to apply to the site problem. These will be a refinement of those identified in Task 4 A. They will provide the basis for developing detailed alternatives during the Feasibility Study.

c. The Preliminary Remedial Technologies should be presented in a table, or matrix, with all technologies or actions shown and one sentence qualifiers for the criteria. Criteria should include, but not be limited to, applicability to the problem, reliability, implementability, damage to the environs, initial cost, O&M, etc. This should be a separate deliverable for use in negotiations and planning.

TASK 5 -- SITE INVESTIGATIONS ANALYSIS

Prepare a thorough analysis and summary of all site investigations and their results. The objective of this task will be to ensure that the investigation data are sufficient in quality and quantity to support the feasibility study.

The results and data from all site investigations must be organized and presented logically so that the relationships between site investigations for each medium are apparent.

a. Data Analysis. Analyze all site investigations and develop a summary of the type and extent of contamination at the site. This analysis must include all significant pathways of contamination and an exposure assessment. The exposure assessment should describe any threats to public health, welfare, or the environment. The analysis should discuss the degree to which either source control or off-site actions are required to significantly mitigate the threat to public health, welfare, or the environment. If the results of the investigation indicate that no threat or potential threat exists, a recommendation to stop the remedial response should be made.

b. Application to Preliminary Technologies. Analyze the results of the site investigations in relation to the preliminary remedial technologies developed in Task 4. Data supporting, or rejecting, types of remedial technologies, compatability of wastes and construction materials, and other conclusions should be presented.

TASK 6 -- FINAL REPORT

Prepare a final report covering the remedial investigation phase and submit copies to EPA. The report shall include the results of Task 1 through 5, and should include additional information in an appendix. The report shall be structured to enable the reader to cross-reference with ease.

TASK 7 -- COMMUNITY RELATIONS SUPPORT

Furnish the personnel, services, materials, and equipment required to undertake community relations program. Although this may be a limited program, community relations must be intergrated closely with all remedial response activities. The objectives of this effort are to achieve community understanding of the actions taken and to obtain community input and support prior to selection of the remedial alternative(s).

Community relations support includes but may not be limited to the following:

- Revisions or additions to community relations plans including definition of community relations program needs for each remedial activity.
- Analysis of community attitudes toward proposed actions.
- Preparation and dissemination of news releases, fact sheets, slide shows, exhibits, and other audio-visual materials designed to apprise the community of current or proposed actions.
- Establishment of a community information center.
- Arrangement of briefings, press conference, workshops, and public and other informal meetings.
- Assessment of the successes and failures of the community relations program.
- Preparation of reports and participation in public meetings, project review meetings, and other meetings as necessary to the normal progress of the work.
- Solicitation, selection and approval of subcontractors, if needed.

All community relations support must be consistent with:

- Superfund community relations policy, as stated in the "Guidance for Implementing the Superfund Program".
- Community Relations in Superfund -- A Handbook.

TASK 8 -- ADDITIONAL REQUIREMENTS

a. Reporting Requirements

Monthly reports shall be prepared by the Engineer to describe the technical and financial progress of the project. These reports should discuss the following items:

1. Identification of site and activity.
2. Status of work at the site and progress to date.
3. Percentage of completion.[1]
4. Difficulties encountered during the reporting period.
5. Actions being taken to rectify problems.
6. Activities planned for the next month.
7. Changes in personnel.
8. Actual expenditures including fee and direct labor hours expended for this period.[1]
9. Cumulative expenditures (including fee) and cumulative direct labor hours.
10. Projection of expenditures for completing the project including an explanation of any significant variation from the forecasted target.[1]
11. A graphic representation of proposed versus actual expenditures (plus fee) and comparison of actual vs. target direct labor hours. A projection to completion will be made for both.

The monthly progress report will list target and actual completion dates for each element of activity including project completion and provide an explanation of any deviation from the milestones in the work plan schedule.

b. Chain-of-Custody. Any field sampling collection and analyses conducted shall be documented in accordance with chain-of-custody procedures as provided by EPA.

c. Safety Plan. A safety plan will be developed to protec the health and safety of personnel involved in the remedial investigation. The plan will be consistent with:

- Section 111(c)(6) of CERCLA
- EPA Order 1440.1 -- Respiratory Protection
- EPA Order 1440.3 -- Health and Safety Requirements for Employees Engaged in Field Activities
- EPA Occupational Health and Safety Manual
- Other EPA guidance as provided
- State safety and health statutes
- Site conditions

d. Quality Assurance/Quality Control (QA/QC). The Engineer shall prepare and submit as part of the work plan a Quality Assurance Project Plan for the sampling, analysis, and data handling aspects of the remedial investigation. The plan shall be consistent with the requirements of EPA's Contract Laboratory Program. The plan shall address the following points:

1. QA Objectives for Measurement Data, in terms of precision, accuracy, completeness, representativeness, and comparability.
2. Sampling Procedures.
3. Sample Custody.
4. Calibration Procedures, References, and Frequency.
5. Internal QC Checks and Frequency.
6. QA Performance Audits, System Audits, and Frequency.
7. QA Reports to Management.
8. Preventive Maintenance Procedures and Schedule.
9. Specific Procedures to be used to routinely assess data precision, representativeness, comparability, accuracy, and completeness of specific measurement parameters involved. This section will be required for all QA project plans.
10. Corrective Action.

TASK 9 -- DESCRIPTION OF CURRENT SITUATION AND PROPOSED RESPONSE

Information on the site background, the nature and extent of the problem, and previous activities presented in Task 1 of the remedial investigation may be incorporated by reference.

Following this summary of the current situation, a site-specific statement of purpose for the response, based on the results of the remedial investigation, should be presented. The statement of purpose should be organized in terms of components amenable to discrete remedial measures (e.g., a statement of purpose describing the evaluation of alternatives for treatment of contamination ground water).

TASK 10 -- DEVELOPMENT OF ALTERNATIVES

Based on the results of the remedial investigation and consideration of preliminary remedial technologies (Task 4), develop a limited number of alternatives for source control or off-site remedial actions, or both, on the basis of objectives established for the response and the scoping decision.

a. Establishment of Remedial Response Objectives

Establish site-specific objectives for the response. These objectives shall be based on public health and environmental concerns, information gathered during the remedial investigation, Section 300.68 of the National Contingency Plan (NCP), EPA interim guidance, and the requirements of any other applicable Federal statutes. Preliminary cleanup objectives shall be developed in consultation with EPA and the State.

b. Identification of Remedial Alternatives

Develop alternatives to incorporate remedial technologies, response objectives, and other appropriate considerations into a comprehensive, site-specific approach. Alternatives should include non-cleanup (e.g., alternatives shall be developed in close consultation with EPA and the State.

TASK II -- INITIAL SCREENING OF ALTERNATIVES

The alternatives developed in Task 2 will be screened by the Engineer, EPA, and the State to eliminate alternatives that are clearly not feasible or appropriate, prior to undertaking detailed evaluations of the remaining alternatives.

Conderations to be Used in Initial Screening

Three broad considerations must be used as a basis for the initial screening: cost, effects of the alternative, and acceptable engineering practices. More specifically, the following factors must be considered:

1. Environmental protection. Only these alternatives that satisfy the response objectives and contribute substantiall to the protection of public health, welfare, or the environment shall be considered further. Source control alternatives shall achieve adequate control of source materials. Off-site alternatives shall minimize or mitigate the threat of harm to public health, welfare, or the environment.

2. Implementability and reliability. Alternatives that may prove extremely difficult to implement, will not achieve the remedial objectives in a reasonable time period, or rely on unproven technology will be eliminated.

3. Environmental effects. Alternatives posing significant adverse environmental effects will be excluded.

4. Cost. An alternative whose cost far exceeds that of other alternatives will usually be eliminated. Total cost will include the cost of implementing the alternative and the cost of operation and maintenance.

TASK 12 -- LABORATORY STUDIES [If Required]

Conduct any necessary laboratory and bench scale treatability studies required to evaluate the effectiveness of remedial technologies and establish engineering criteria (e.g., leachate treatment; ground water treatment; compatability of waste/leachate with site barrier walls, cover, and other materials proposed for use in the remedy). It is expected that the scope of this task will depend on the results of Tasks 10 and 11 and therefore will not be complete at the start of Task 13. The Engineer will submit a separate work plan for any proposed laboratory studies for EPA and State approval. This submittal will be made in the timeframe required to maintain steady progress of the overall feasibility study. [Additional studies may also be conducted during the design phase if needed to refine treatability results or develop detailed design criteria.]

TASK 13 -- EVALUATION OF THE ALTERNATIVES

Evaluate the alternative remedies that pass through the initial screening in Task 11 and recommend the most desirable (cost effective) alternative to EPA and the State.

Alternative evaluation shall be preceded by a detailed development of the remaining alternatives.

a. Detailed Development of Remaining Alternatives

The detailed development of the remaining feasible remedial alternatives shall include as a minimum:

1. Description of appropriate treatment and disposal technologies.

2. Special engineering considerations required to implement the alternative (e.g., pilot treatment facility, additional studies needed to proceed with final remedial design).

3. Environmental impacts and proposed methods, and costs, for mitigating any adverse effects.

4. Operation, maintenance, and monitoring requirements of the remedy.

5. Off-site disposal needs and transportation plans.

6. Temporary storage requirements.

7. Safety requirements for remedial implementation (including both on-site and off-site health and safety considerations).

8. A description of how the alternative could be phased into individual operable units. The description should include a discussion of how various operable units of the total remedy could be implemented individually or in groups, resulting in a significant improvement to the environment or savings in costs.

9. A description of how the alternative could be segmented into areas to allow implementation of differing phases of the alternative.

10. A review of any off-site facilities provided by the state to ensure compliance with applicable RCRA requirements, both current and proposed.

b. Environmental Assessment

Perform an Environmental Assessment (EA) for each alternative. The EA shall include, at a minimum, an evaluation of each alternative's environmental effects, an analysis of measures to mitigate adverse effects, physical or legal constraints, and compliance with CERCLA or other regulatory requirements.

Each alternative will be assessed in terms of the extent to which it will mitigate damage to, or protect, public health, welfare, and the environment, in comparison to the other remedial alternatives. The specific considerations to be used in the assessment will be different for source control alternatives and for off-site alternatives, as explained in EPA guidance. Consideration may be given to standards and criteria developed under Federal or State environmental and health statutes.

c. Cost Analysis

Evaluate the cost of each feasible remedial action alternative (and for each phase or segment of the alternative). The cost will be presented as a present worth cost and will include the total cost of implementing the alternative and the annual operating and maintenance cost. Both monetary costs and associated non-monetary costs will be included. A distribution of costs over time will be provided.

d. Evaluation and Recommendation of Cost-Effective Alternativ

Alternatives shall be evaluated using technical, environmental, and economic criteria. At a minimum, the following areas will be used to evaluate alternatives:

1. Reliability. Alternatives that minimize or eliminate the potential for release of wastes into the environment will be considered more reliable than other alternatives. For example, recycling of wastes and off-site incineration would be considered more reliable than land disposal. Institutional concerns such as management requirements can also be considered as reliability factors.

2. Implementability. The requirments of implementing the alternatives will be considered, including phasing alternatives into operable units and segmenting alternatives into project-areas on the site. The requirements for permits, zoning restrictions, right of ways and public acceptance are also examples of factors to be considered.

3. Operation and Maintenance Requirements. Preference will be given to projects with lower O&M requirements, other factors being equal.

4. Environmental Effects. Alternatives posing the least impact (or greatest improvement) on the environment will be favored.

5. Safety Requirements. On-site and off-site safety requirements during implementation of the alternatives should be considered. Alternatives with lower safety impact and cost will be favored.

6. Cost. The remedial alternatives with the lowest total present worth cost will be favored. Total present worth cost will include capital cost of implementing the alternative and cost of operations and maintenance of the proposed alernative.

Recommend the alternative determined to be the most cost-effective. The recommendation will be justified by stating the relative advantages over other alternatives considered. Evaluate considerations shall be applied uniformly to each alternative. The lowest cost alternative that adequately protects (or mitigates damage to) public health, welfare, or the environment will be considered and is technologically feasible and reliable as the cost-effective alternative.

e. Preliminary Report

Prepare a preliminary report presenting the results of Tasks 9 through 13 and the recommended remedial alternative Submit [specify number and distribution] copies of the preliminary report to EPA and the State. (Note: EPA and the State will review and select a remedial alternative

TASK 14 -- CONCEPTUAL DESIGN

Prepare a conceptual design of the remedial alternative selected by EPA and the State. The conceptual design shall include, but is not limited to, the engineering approach including implementation schedule, special implementation requirements, institutional requirements, phasing and segmenting considerations, preliminary design criteria, preliminary site and facility layouts, budget cost estimate (including operation and maintenance costs), operating and maintenance requirements and duration, and an outline of the safety plan including cost impact on implementation. Any additional information required as the basis for the completion of the final remedial design will also be included. The Engineer may also be required to revise portions of the community relations plan to reflect the results of the conceptual design.

TASK 15 -- FINAL REPORT

Prepare a final report for submission to EPA and the State. The report shall include the results of Tasks 9 through 14, and should include any supplemental information in an appendix. Submit [specify number of distribution of copies] to EPA and the State.

TASK 16 -- ADDITIONAL REQUIREMENTS

Reporting requirements are described in Task 8 of the remedial investigation scope of work.

5. Prepare an assessment of the present and potential effects of contaminant migration on the surrounding environment:

   - Modeling of contaminant migration to predict potential effects
   - Evaluation of health and/or environmental risks associated with contaminant levels identified

6. Discussion of the hazards and potential hazards associated with site for which corrective action is required.

7. Development of remedial alternatives

8. Evaluation of each alternative to include those items outlined in the NCP §300.68 and:

   - Unit cost estimates
   - Long-term integrity
   - Timeliness of implementation
   - Conformance with federal, state and local rules and regulations

9. Recommendation of the alternative to be implemented.

10. Evaluation of the need for continued monitoring after termination of this project.

Statement of Work

Tasks associated with this project shall include:

1. Identification and characterization of potential sources of contamination:

   - Review EPA, State & Local files
   - Review other data sources as applicable to identify past and present industries and other sources in area potentially responsible for site conditions (e.g. aerial photos, Fire Department records, tax records)

2. Development of a community relations plan for addressing the public's concern during site studies.

3. Prepare a detailed investigative plan which will include:

   - Health and Safety Plan
   - Chain-of-Custody Procedures
   - Sampling and Analytical Plan
   - Quality Assurance/Control Protocol

4. Determination of migration pathways and extent of contamination:

   - Compile meteorological data of area for later use in modeling migration pathway (e.g. water balance calculations)
   - Conduct a hydrogeological investigation of the site area to determine the relationship between contaminant migration and drinking water wells, surface waters and upper and lower aquifer
   - Conduct air, soil, surface water, groundwater and leachate sampling as appropriate to fully define the release and potential release of hazardous substances from the site